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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,181	04/02/2004	Earl F. Crandall	033859-008	2399

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/817,181	Applicant(s) CRANDALL ET AL.	
	Examiner Peter J. Macchiarolo	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 02 April 2004.
- 2a)  This action is FINAL.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-11 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All   b)  Some \*   c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04/02/2004
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_

**DETAILED ACTION**

*Priority*

1. Receipt is acknowledged of the claim for benefit of Title 35, United States Code, Section 120 of the United States provisional application 60/460,505.

*Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 04/02/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

*Claim Objections*

3. Claim 1 is objected to because of the following informalities:
4. Claim 1 recites "the gas discharge tube," however there is not proper antecedent basis for this term. The Examiner reads, "a gas discharge tube." Appropriate correction is required.

*Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

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6. Claim 1 recites “the glass envelope sealing a volume around the gas discharge tube that is at least partially evacuated.” It is not clear what is at least partially evacuated, the glass envelope or the gas discharge tube. For the purpose of examination, the Examiner interprets the gas discharge tube is at least partially evacuated. The remaining claims are rejected due to their dependency.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 3, 4, 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juestel et al (PGPUB 20020027420; “Juestel”) in view of Fiene et al (USPN 6814462; “Fiene”).**

8. Regarding claims 1 and 4, Juestel shows in figure 1, a gas discharge lamp, comprising: a base (5) configured to receive electrical power from a power source, a ballast [0040] electrically connected to the base, a gas discharge tube (1) configured to receive the high frequency AC waveform and emit UV light by passing the a waveform through a mixture of gases contained within the gas discharge tube and to emit UV photons in response, and a visible light emitting surface having a glass envelope (2) of different geometry than the gas discharge tube and a phosphor coating (4) placed on the inside of the glass envelope, the glass envelope sealing a

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volume around the gas discharge tube, the gas discharge tube being at least partially evacuated [0018].

9. Juestel is silent to the ballast being a high frequency ballast configured to convert the electrical power to a high frequency AC waveform for driving a gas discharge tube.

10. However, it is noted that the inclusion of a high frequency ballast is not shown to solve any problems or yield any unexpected results that are not within the scope of Juestel's lamp.

Accordingly, the inclusion of a high frequency ballast is considered to be an obvious matter of design choice to suit the intended power needs and space requirements. For example, Fiene shows in figure 5 that a ballast for a compact fluorescent lamp can be a high frequency ballast which converts the waveform to about 100khz (column 7 lines 31-35) which reduces the overall size of the circuitry.

11. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel with a high frequency ballast to properly power the device and excite the phosphors while minimizing the physical size of the circuitry.

12. Regarding claim 3, Juestel shows that the base is a standard candelabra base [0040].

13. Regarding claim 6, Juestel discloses the gas discharge tube comprises UV transparent material [0039].

14. Regarding claim 7, Juestel discloses the mixture of gasses includes argon [0018].

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15. Regarding claim 8, Juestel shows in figure 1 the geometry of the gas discharge tube is cylindrical but may be a multiple-bent or coiled tube [0022].

16. Regarding claim 9, Juestel discloses the phosphor coating on the inside of the glass envelope is configured to convert UV photons emitted by the gas discharge tube into visible light photons [0026].

17. Regarding claim 10, Juestel discloses the glass envelope is configured to block UV photons that are not converted by the phosphor coating [0027].

18. Regarding claim 11, the Examiner notes that the limitation, “wherein the VLES is configured for use as a sign” is an intended use type limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

**19. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Juestel in view of Fiene in view of Nishio et al (USPN 5828170; “Nishio”).**

20. Regarding claim 2, Juestel and Fiene are silent to the use of a DC blocking capacitor which block DC current from the high frequency ballast from reaching the gas discharge tube.

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21. However, it is noted that the inclusion of a DC blocking capacitor is not shown to solve any problems or yield any unexpected results that are not within the scope of Juestel and Fiene's lamp. Accordingly, the inclusion of a DC blocking capacitor is considered to be an obvious matter of design choice to suit the intended circuitry needs and operating parameters. For example, Nishio discloses that a DC blocking capacitor is typically used in a high frequency ballast.

22. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel and Fiene with a DC blocking capacitor to meet certain operating parameters.

**23. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Juestel in view of Fiene in view of Applicant's Admitted prior art.**

24. Regarding claim 5, Juestel discloses that a coil of tungsten is used as an electrode in the gas discharge tube [0002], which indicates that a hot or cold cathode type of electrode is used.

25. Although Juestel nor Fiene explicitly mention the type of cathode used, Applicant shows in the admitted prior art, figure 1, that a compact fluorescent gas discharge lamp is known to include electrodes for receiving the high frequency AC waveform from the gas discharge tube, the electrodes being one of a cold cathode and a hot cathode type. One would be motivated to use a hot or cold cathode type electrode since their electrifying properties are extremely predictable since they are both known in the art.

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26. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the lamp of Juestel and Fiene with a cold or hot type cathode.

*Conclusion*

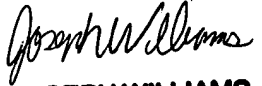
27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



  
**JOSEPH WILLIAMS**  
**PRIMARY EXAMINER**